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ABSTRACT

In an effort to improve the quality of life for area senior citizens, De Anza College has established an older adult education program which combines adaptive physical education with holistic health care principles to instruct students in relaxation, nutrition, and physical activity. Classes are held in convalescent hospitals, retirement homes, and selected community centers, and care is taken to assure that instructors know their students' individual case histories. Handicapped students require a medical affidavit signed by a physician which details the student's condition and limitations; non-handicapped seniors must sign a release form indicating that they do not have any of six specified disabilities. All students fill out functional ability assessments which indicate the student's range of motion, ability to walk, and posture. Courses offered in the program include arm chair exercise, holistic physical education, yoga, contract bridge, exercise set to jazz, dance movement, minor sports, self-defense, and holistic health. Instructors are trained to avoid activities which are potentially dangerous and to monitor students for signs of fatigue or overwork. The descriptive report describes each of the courses that are offered, identifies potentially dangerous activities, and provides copies of the forms used to gather information for the student case histories. (JP)

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OLDER ADULT EDUCATION

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by

Jeffrey Forman
De Anza College
April 29, 1980

JC 800 274

OLDER ADULT EDUCATION

The problem of what to do with our rapidly increasing number of older citizens is a relatively new one in the United States. At the turn of the century the life expectancy in this country was only 41 years, a sharp contrast to the 73 years expected today. Modern medicine has created a vast group of older individuals for whom society has no role. Instead of being honored for their accomplishments, they are forced to retire into an oblivion known as old age - a time that often does not offer a meaningful or quality existence.

The question must be asked, should older people be forced to live lives that are merely existence-oriented or should they be afforded opportunities to learn, grow, and share their experiences? De Anza College answered that question by creating the Older Adult Education Program offering senior citizens a brighter alternative.

Recognizing the community's failure, the OAE was created under the premise that education is a lifelong process that should be offered to all segments of the population, including the elderly. In this evolutionary educational experiment, De Anza offers Adaptive Physical Education and cognitive classes to residents of convalescent hospitals, retirement centers, and other older persons who meet together in selected community centers. This program, which started out with six facilities, has now expanded to 26 facilities. Over 650 older citizens from the community are now enrolled in the Adaptive Physical Education classes.

Data supporting the merits of physical activity for older persons can be found throughout the related literature. The April, 1977, edition of the "Research Digest," published by the President's Council on Physical Fitness and Sports, clearly indicates that even older people who have been sedentary for many years can be trained in worthwhile physical fitness components. In "The Effects of Rhythmic Exercise on the Range-of-Motion of Older Adults," Lesser reported that exercise can improve flexibility and mobility in older adults in addition to helping them maintain their independence.

DeVries has found that exercise for adults is more effective in relaxing the muscles than tranquilizers. Collectively, research in geriatric adaptive P.E. indicates that exercise and increased activity cannot put a halt to the aging process, but can retard it.

It is common knowledge that the human organism must get the proper balance of rest, nutrition and physical activity in order to stay healthy. However, the fact exists that many Americans do not maintain a balanced diet, get enough exercise, or know how to relax without chemicals. The educational system has grossly failed to persuade the public to incorporate good health practices into their daily lives. These implications are particularly important to older individuals because the effects of living out of the aforementioned balance are multiplied by the aging process. Utilizing Adaptive Physical Education and holistic health-care principles, the classes attempt to instruct students in relaxation, nutrition, and physical activity so they may lead healthier, less restricted lives.

In the classroom, the geriatric adaptive physical educator will encounter a wide variety of disorders, as well as enormous differences in functional ability. Students' ability levels will run the gamut from the completely healthy older individual to those requiring total care due to some physical and/or psychological limitation. The diversity present demands that the instructors know their students' individual case histories, especially if any contraindications to exercise exist.

For handicapped older students, medical information is needed to help formulate a safe, beneficial program, while concurrently meeting the State's mandate that requires adaptive physical educators to work only under a doctor's prescription. The law also demands each handicapped student have an up-to-date medical verification, signed by the physician and placed in the school files before they can participate. This document will allow the student to partake in the activities the doctor has selected, in addition to recording the student's diagnosis, prognosis, limitations, and contraindications for the instructor's reference (See Figure 1). This form

must be updated yearly, or whenever a change in the student's physical status occurs.

Another effective means of gathering more data on each handicapped student is to complete a functional ability assessment on them (See Figure 2). In addition to fulfilling the educational system's requirement of developing an IEP for each student, this device will provide the instructor with information regarding the student's functional range-of-motion, ability to ambulate, and posture. Also listed on the cards are the student's diagnosis, contraindications, activity program outline, and progress notes. The instructor must fully update these IEP's quarterly, whereas progress notes may be added whenever improvement or regression is observed.

The medical verification form and the functional ability assessment must be completed in order to justify claim for State handicapped funds. There is, however, another alternative available for the non-handicapped older adult.

De Anza College considers individuals over 55 years of age belong to a special population, whose needs demand an adaptive physical education program that will not jeopardize their health and safety. There are many completely healthy older individuals who desire to participate in physical education, but do not wish to incur the expense of a visit to the doctor just to obtain a medical verification. Recognizing the fact that these individuals could sustain injury from participation in regular physical education, De Anza developed a way by which these students could join adaptive physical education classes. It was determined these non-handicapped, older students must sign a release form, indicating they do not have one of the listed disabilities (Figure 3). This form is an attempt to uncover any major medical problems that might contrindicate participation in certain activities. This form is by no means releasing the College from its responsibility if an injury occurs in a class it is merely an attempt to screen out those individuals whose physical problems should be known by their instructor. It was determined that those students who sign a "Risk Form" do not need as extensive an IEP as the functional ability assessment

because they are not handicapped. This fostered the development of a "Goal Card" which includes brief statements of short and long term objectives as well as the students' personal goals. This IEP for non-handicapped older adults must be updated by the instructor quarterly (Figure 4).

The OAE Program offers a diversified curriculum for the older adult that was developed specifically to meet their needs. Classes attempt to maximize the students' physical potential while providing a forum for social interaction and having fun. The following classes are offered to the older adult by the Adaptive and Rehabilitative Physical Education Division at De Anza College. These courses supplement the existing on-campus courses in hydrotherapy, water exercise, weight training, muscle testing and ambulation training.

ARM CHAIR EXERCISE:

In this class, the instructor selects activities according to the student's functional ability level. Students are instructed in exercises that can be performed while seated or if possible, by holding onto their chairs. Emphasis is placed on improving strength, endurance, circulation, and flexibility so students can remain as independent as possible for as long as possible. The class utilizes music, movement experiences, indoor games and various exercise apparatus.

HOLISTIC PHYSICAL EDUCATION FOR THE OLDER ADULT:

This class combines instruction in proper diaphramatic breathing, relaxation, exercise and safe stretching techniques. Discussion includes posture and body mechanics, self-massage, headache control, and the relief of back problems. The instruction is designed to sustain and/or improve flexibility, circulation, and muscular endurance.

YOGA FOR SENIORS:

This class for seniors over the age of 55 aims at developing flexibility, strength and control through systematic stretches and exercises for all parts of the body. Yoga is particularly advantegeous to seniors as all activities are done slowly and deliberately with special attention to controlled breathing and relaxation. Yoga, therefore, helps to relieve physical and mental tension and helps to develop inner confidence and poise. The class begins with warm-up conditioning exercises followed by postures and breathing techniques. Every class ends with a relaxation and meditation period. Short talks emphasize the need for good general health habits. Each individual is encouraged to progress at his/her own pace, so beginners and more experienced students may benefit at any level. There is no competition. Everyone who tries, succeeds.

CONTRACT BRIDGE:

The continuing course for the mature adult is designed to be thought-provoking and to exercise the reasoning powers of the student. Beginners are taught the basics, then are individually supervised during the play of the game. Intermediates are taught the finer points of the game and are encouraged to polish their game-play by extensive practice. Lectures and quizzes are printed up and copies are handed out to each student so as to form a portfolio for study and reference. The instructors are dedicated to making the course as instructive, interesting, and entertaining as possible.

JAZZERCISE FOR THE OLDER ADULT:

Tired of calistenics? Tired of ordinary exercise? Jazzercise is a fun way to dance your fat away. Jazzercise promotes cardio-vascular endurance

and flexibility through a set routine of exercises and dance steps to music. Rhythmic movements include warm-up and warm-down. The class ends with relaxation to peaceful music and prescribed relaxation techniques.

DANCE MOVEMENT:

This course is designed to introduce light exercise to music along with yoga relaxation techniques. The class starts out with warm-up exercises that include simple stretches for the arms and face, followed by walking warm-ups. Self-massage of the neck and shoulders will be used as the students continue to work down the body. Mat exercises are carried out, followed by relaxation. Students have the opportunity to create their own programs within the class structure.

MINOR INDOOR AND OUTDOOR SPORTS AND ACTIVITIES FOR THE OLDER ADULT:

This course exposes the student to a variety of safe outdoor games and activities. The student will participate in Bocce or lawn bowling, horseshoes, shuffleboard, miniature golf, brisk walking and jarts. The intent is to have fun and exercise while enjoying the sunshine and fresh air.

SELF DEFENSE FOR THE OLDER ADULT:

This class will expose the student to a variety of techniques and strategies of self defense that are feasible for the older adult. Major emphasis will be placed on using common sense to help avoid certain dangerous situations. Students will be trained in stretching, release grips, offensive maneuvers, the blocking of blows, and how to fall safely. Discussion will also include the pros and cons if carrying weapons.

HOLISTIC HEALTH FOR THE OLDER ADULT:

This course will discuss various illnesses and disabilities that are commonly associated with the aging process. Research data on lifespan and the factors affecting it will be presented. Instruction on how to recognize, isolate, and record stress triggers will be included along with various organic stress-reduction techniques. Students will be instructed in diaphragmatic breathing and visual imagery. In addition, the contract-relax and diminishing-tensions methods for developing muscular awareness will be practiced. Biofeedback equipment will be used to determine their effectiveness in reducing muscular tension, improving circulation, and relieving headaches. Demonstration and practice of self-massage for the head, neck, shoulders, feet, legs, and back is included with particular attention being paid to the healing benefits offered by Chinese accupressure points. There will be discussion on ideal posture and common deviations from the norm with exercises designed to restore the body back to its normal alignment, equilibrium, and health. Instruction will also be provided in exercises designed to safely sustain or improve muscular strength, endurance, flexibility, coordination, and balance. Techniques of body mechanics will be explained to help the student avoid future injuries. Information on fad diets and the use of various foodstuffs and additives will be presented with special emphasis placed on commonly abused substances and on how to restructure the diet for improved health.

AVOIDANCE ACTIVITIES FOR THE OLDER ADULT:

The elderly are a special population with diverse problems that must be considered when outlining an exercise program for them. The following activities are potentially dangerous and must always be avoided with this group of students.

ACTIVITY TO AVOID	EXPLANATION
1. Neck rolling or neck circles.	This exercise may cause degenerative changes in the cervical vertebrae due to the evaporation of synovial fluid and osteoporosis commonly associated with aging.
2. Toe touches or any straight leg bending against gravity.	These activities could strain the structures of the low back.
3. Leg lifts or sit-ups.	These exercises should be avoided if the student are incapable of rotating the pelvis posterioral isolating the abdominal muscles. Avoid any activity that shortens the hip flexor muscles because this can lead to anterior pelvic tilt which may result in low back pain, sciatica, and possibly, spondylolisthesis. To do these correctly, the low back must be flat and in contact with the ground throughout the entire exercise.
4. Arching of the lumbar spine.	Shortening of the lumbar extensor muscles may result in anterior pelvic tilt and the same problems that occur when the hip flexors become shortened.
5. Jarring, jumping, bending and twisting type movements.	These activities put too much strain on the lumbar vertebrae. Never allow students to bend forward and then twist while straightening their backs.
6. Ballistic stretching.	This type of stretch should be avoided because when bouncing one cannot tell when one goes beyond the intrinsic limits of the joint or pain This method is not as safe or effective as a slow, relaxed, steady stretch.
7. Holding of the breath.	Never allow your students to hold their breath during exercise because it may produce the valsalva effect which results in increased intrathoracic pressure, slowing of the pulse, decreased return of the blood to the heart, and increased venous pressure. They may pass out or go into ventricular fibrillation.
8. Isometric exercises.	Should always be avoided in individuals over 45 years of age because they raise the diastolic blood pressure dangerously high.
9. Internal rotation and adduction of the hip joint.	This can aggravate the hip joint possibly popping the head of the femur out of the socket. Do not confuse with external rotation and abduction which is a very beneficial activity.

While instructing an exercise program for a geriatric population, it is essential to reinforce frequent rest periods because some individuals just do not know when to quit.

The instructor must constantly monitor his students for any signs of fatique or overwork that may appear. The signs to look for are: 1) red face; 2) labored breathing; 3) profuse sweating; 4) dizziness; 5) pain in the chest; 6) rapidly pounding heart; 7) grimacing; and 8) vacant stare.

The geriatric adaptive physical educator should always use assistants and common sense. Never allow an individual to exercise independently on any potentially dangerous apparatus because one will find that students will have their good and bad days, and what was an easy task on one day, may be impossible the next. In addition, the instructor should not always trust the student's word concerning his/her ability level because the data received is at time, to say the least, not very reliable. Use caution, think safety, keep your eyes and ears alert, and don't turn your back. In addition, instructors should set safe, realistic, attainable goals for students, avoiding fear, frustration and injury. Positive reinforcement should be used constantly.

Exercises and activities should be performed in smooth, controlled movements with the students never holding their breath. In addition, the students should be told what normal range-of-motion is so they know what they should approximate. Activities can be progressively modified by altering the speed, duration, intensity, and space utilized. Remember to always work within the students' capabilities. If possible, the amount of standing time should be increased to assure the students receive the amount of longitudinal stress needed to prevent calcium reabsorption which may lead to osteoporosis (soft, brittle bones) and/or to development of renal calculi (kidney stones).

The classes are instructed by credentialed adaptive physical educators who

are trained to meet the needs of the aging population. Utilizing various apparatus and exercise techniques, the classes attempt to give students a total conditioning program. These exercises are designed to help students sustain or develop adequate muscular strength, endurance and flexibility, cardio-pulmonary endurance, coordination and balance. Through movement the instructors attempt to prevent contractures and disuse atrophy, maintain muscle tone, improve circulation, increase caloric expenditure, and burn off excess energy. Instruction is also provided in various stretching, relaxation and breathing techniques. One-to-one assistance is provided when necessary to assure the students maintain safe and proper exercise techniques.

The instructors explain and demonstrate proper body mechanics so the students will have the knowledge to avoid certain potentially harmful situations that may arise in their daily lives. Much emphasis is placed upon good posture and the development of a kinesthetic sense to maintain it.

Many diverse activities are incorporated into the geriatric physical activity program. Frequently, older individuals are resistant to change, and avoidance of the same routine is gained by experimentation with different activities.

Classes held at community centers and retirement facilities are logically more advanced than those that take place at convalescent hospitals. Students enjoy exercising to music, particularly country sounds. Activities can be performed seated or standing, holding onto a chair for support. Hula hoops, pvc tubes, surgical tubing, bean bags, beach balls, and a medicine ball are utilized in the class. Floor movement exploration activities are also part of armchair exercise classes.

In the convalescent hospitals, group classes are parallel to those held in the retirement facilities, but are adapted to meet the needs of individuals with lower functional ability. Parachute activities, cane ball or sockey, volley balloon, bean bags and ball activities are very popular in this program.

The classes bring people together and afford them opportunities to socialize, kindle new friendships, and to have fun. The affiliation gained through participation in group activities, the satisfaction gained from overcoming challenges in class, in addition to the positive reinforcement gained from their increased vigor and vitality, will improve their self-image and will surely give them more reason to get up every day. Old age is a time to live and enjoy life, not to merely exist.

FIGURE 1

DE ANZA COLLEGE
21250 Stevens Creek Boulevard
Cupertino, California 95014
(408)996-4734

VERIFICATION OF PHYSICAL LIMITATION

Corrective Physical Education Date: _____

_____
Last First Middle

_____
Street Address City & State Zip Code

_____ _____ _____ _____
Phone Birthdate Age Social Security Number

meets the educational definition for the physically handicapped (see reverse side) by reason of the following health problem:

Diagnosis: _____

Description: _____

_____

a) Degree of Disability: _____

_____

b) Prognosis & Limiting Effects: _____

_____

c) Recommendations for Corrective Physical Education: _____

_____

_____

_____ _____
Physician's Name (typed or stamped) Physician's Signature Title

_____ _____
Physician's Address Physician's Phone

If Applicable:

_____
Title of Agency

_____
Address City State

Please return to De Anza College as soon as possible in the self-addressed stamped envelope provided.

DEFINITIONS OF PHYSICALLY HANDICAPPED FOUND IN THE EDUCATION CODE, DIVISION 1, TITLE 5, SECTION 3600, ARTICLE 1.

The Deaf - a person is deaf if he comes within any of the following descriptions: 1) hearing loss in the better ear that is from 70 decibels in the speech range to inability to distinguish more than two frequencies at the highest measurable level of intensity. 2) hearing loss in the better ear that averages 50 or more decibels in the speech range.

Severely Hard of Hearing - a person is severely hard of hearing if he comes within any of the following descriptions: 1) hearing loss in the better ear that is from 45 to 70 decibels in the speech range. 2) hearing loss in the better ear that averages more than 30 decibels in the speech range.

Moderately Hard of Hearing - a person is moderately hard of hearing when the following statement applies: 1) hearing loss in the better ear of from 20 to 40 decibels in the speech range.

Blind - a person is blind who falls within the following description: 1) visual acuity in the better eye, after the best correction is 20/200 or less.

Partially Seeing - a person is partially seeing who falls within the following description: 1) visual acuity of 20/70 or less in the better eye, after best correction.

Orthopedic or Other Health Impairment - a person is orthopedic or other health impaired if a licensed physician or surgeon finds in his diagnosis that the person has a serious impairment of his locomotion or motor function and that the impairment was caused by crippling due to one of the following:

1. Cerebral Palsy
2. Poliomyelitis
3. Infection, such as bone and joint tuberculosis and osteomyelitis
4. Birth injury, such as Erb's palsy or fractures
5. Congenital anomalies, such as congenital amputation, club foot, congenital dislocations or spina bifida
6. Trauma, such as amputations, burns, or fractures
7. Tumors, such as bone tumors, or bone cysts
8. Developmental diseases, such as coxa plana or spinal osteochondritis
9. Other conditions such as fragile bones, muscular atrophy, muscular dystrophy, Perthes' Disease, hemophilia, uncontrolled epilepsy, or severe cardiac impairment
10. Drug dependency
11. Some other cause described in the physician's written diagnosis
12. Neurological impairment or dysfunction

Aphasic and/or Other Severe Oral Language Handicapped - a person is Aphasic and/or other severe oral language handicapped when all the following apply: 1) severe disability in the comprehension and/or expression of oral language. 2) the person's score on the auditory verbal scales of one or more standard tests or sub-tests of language assessment falls two standard deviations below the mean of the person's mental age. 3) the person is nonverbal or when a spontaneous language sample of at least 50-100 utterances can be obtained, the sample shows development judged clearly inadequate for the person's age in at least two of the following areas of language development: syntactic, semantic, morphologic, phonologic.

Speech Handicapped - a person, exclusive of the deaf, severely hard of hearing, moderately hard of hearing, and aphasic, as defined above, is speech handicapped by having abnormality of speech and oral language calling adverse attention to itself, impairing communication or causing maladjustment arising out of problems with articulation, rhythm, voice or oral language usage.

Other Physically Handicapped - a person is "other physically handicapped" if he comes within either description: 1) a physical illness or physical condition which makes attendance in regular day classes impossible or inadvisable. 2) physical impairment so severe as to require instruction in remedial physical education.

Multihandicapped - refers to any combination of the above.

Pregnancy - a person diagnosed by a licensed physician and surgeon as pregnant.

A.G.E. FUNCTIONAL ABILITY ASSESSMENT

Date Tested												
Body Side	R	L	R	L	R	L	R	L	R	L	R	L
SHOULDER JOINT:												
Internal Rotation												
External Rotation												
Abduction												
Horizontal Ab.												
Horizontal Add.												
Flexion												
Extension												
Hyperextension												
ELBOW:												
Flexion												
Extension												
Supination												
Pronation												
WRIST:												
Flexion												
Extension												
FINGERS:												
Opposition												
Flexion												
Extension												
Abduction												
Adduction												
KNEE:												
Flexion												
Extension												
HIP:												
Flexion												
External Rotation												
Abduction												
Adduction												
ANKLE:												
Plantar Flexion												
Dorsi Flexion												
Inversion												
Eversion												

KEY: N = Normal
L = Limited
1 = mild; 2 = moderate; 3 = severe

Posture Evaluation: Forward Head=1 2 3
Kyphosis=1 2 3; Lordosis=1 2 3
Scoliosis=1 2 3

NAME: AGE: B/P:

FACILITY: ROOM:

DOCTOR'S DIAGNOSIS:

CONTRAINDICATIONS:

AMBULATION STATEMENT:

ACTIVITY PROGRAM AND PROGRESS NOTES:

FIGURE 2

FIGURE 3

ADAPTIVE & REHABILITATIVE PHYSICAL EDUCATION

I desire to engage voluntarily in the course/program offered by the Foothill-De Anza Community College District listed below and acknowledge the following information:

RISKS AND DISCOMFORTS: The program may involve discomforts commonly associated with exercise such as sweating, increased heart and breathing rates and raised body temperature. There is a risk of certain changes occurring during or following the exercise.

THERE WILL BE NO MEDICAL SUPERVISION OF THE PROGRAM:

Any person with a history of cardiovascular disease (heart attack, high blood pressure, stroke, angina), conditions affecting the spinal column, or joint problems should NOT consider the program without the approval of his/her physician.

In acknowledgement of the above, I certify that I have not had, and so far as I am aware, presently do not have any of the conditions as suggested above. Further, I agree to save and hold harmless the Foothill-De Anza Community College District, its officers, agents, and employees from any responsibility for occurrences resulting from my participation in the program.

I have read the foregoing and I understand it. Any questions which have arisen or occurred to me have been answered to my satisfaction.

Course/Program _____ Master # _____

Signed _____

Instructor _____ Date _____

8/24/79

FIGURE 4

ADAPTIVE PHYSICAL EDUCATION

NAME _____ SOCIAL SECURITY # _____

DESCRIPTION OF PHYSICAL CONDITION: ☐ POOR ☐ FAIR ☐ GOOD ☐ EXCELLENT

PERSONAL GOALS

DATE	SHORT TERM GOALS

#1603

DATE	LONG TERM GOALS

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